



*Advisory Board Quarterly Meeting
Second Quarter FY08*

Presented to
District Energy Advisory Board

February 21, 2008



Agenda

1. Call to Order
2. Election of Chair & Vice Chair
3. Review & Approval of Meeting Minutes for August 16, 2007 & November 15, 2007
4. Review and Comparison of DES Unit Costs
5. Review of Operations Monitoring Reports
6. Natural Gas Purchasing Up-Date
7. Financial Report: 2nd Quarter FY08
8. FY2009 Budget Status Report
9. Capital Projects Review
10. Customer Contract Capacity Reviews
11. Other Board Member Items
12. Adjourn



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1. Call to Order



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2. Election of Chair & Vice Chair



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3. Review and Approval of Meeting Minutes of August 16, 2007 & November 15, 2007



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4. Review and Comparison of DES Unit Costs

Summary Table 4A: FY08 & FY07 Unit Cost
Comparison

Summary Table 4B: National Unit Cost
Comparison

Environmental Review



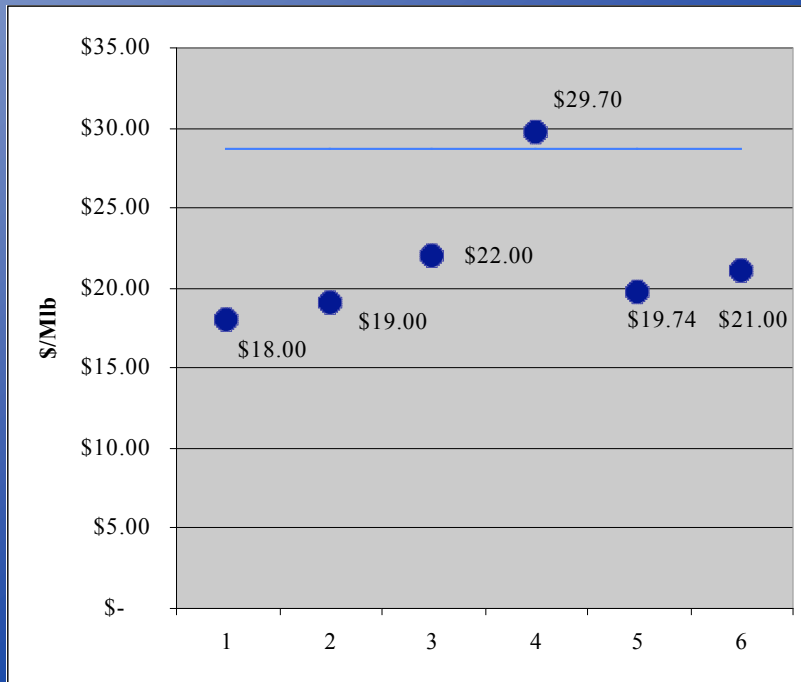
Summary Table 4A: Unit Cost Comparison for Previous 12 Months (Jan 07 to Dec 07)

	Steam (\$ per m lb)			Chilled Water (\$ per ton-hr)		
	FY07	FY08	% Diff.	FY07	FY08	% Diff.
Private	\$24.41	\$27.36	10.8%	\$0.171	\$0.172	0.6%
State	\$24.03	\$29.24	17.9%	\$0.166	\$0.170	2.6%
Metro	\$26.03	\$28.93	10.0%	\$0.164	\$0.158	-3.8%
New Customers	\$21.71	\$25.37	14.4%	\$0.166	\$0.170	2.6%
Aggregate	\$24.76	\$28.57	13.3%	\$0.167	\$0.167	0.0%

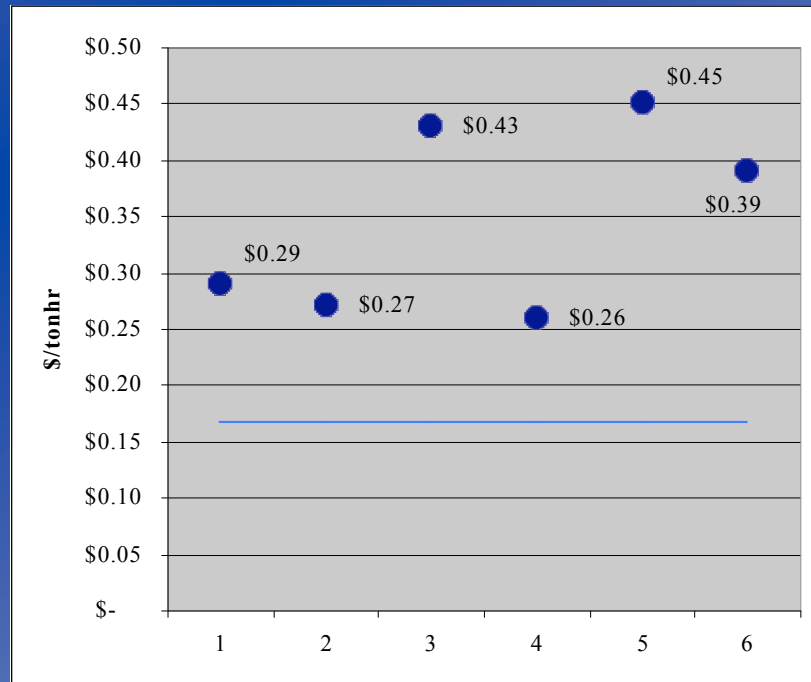


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Summary Table 4B: National Unit Cost Comparison (Rolling DES 12 Month Avg)



Steam

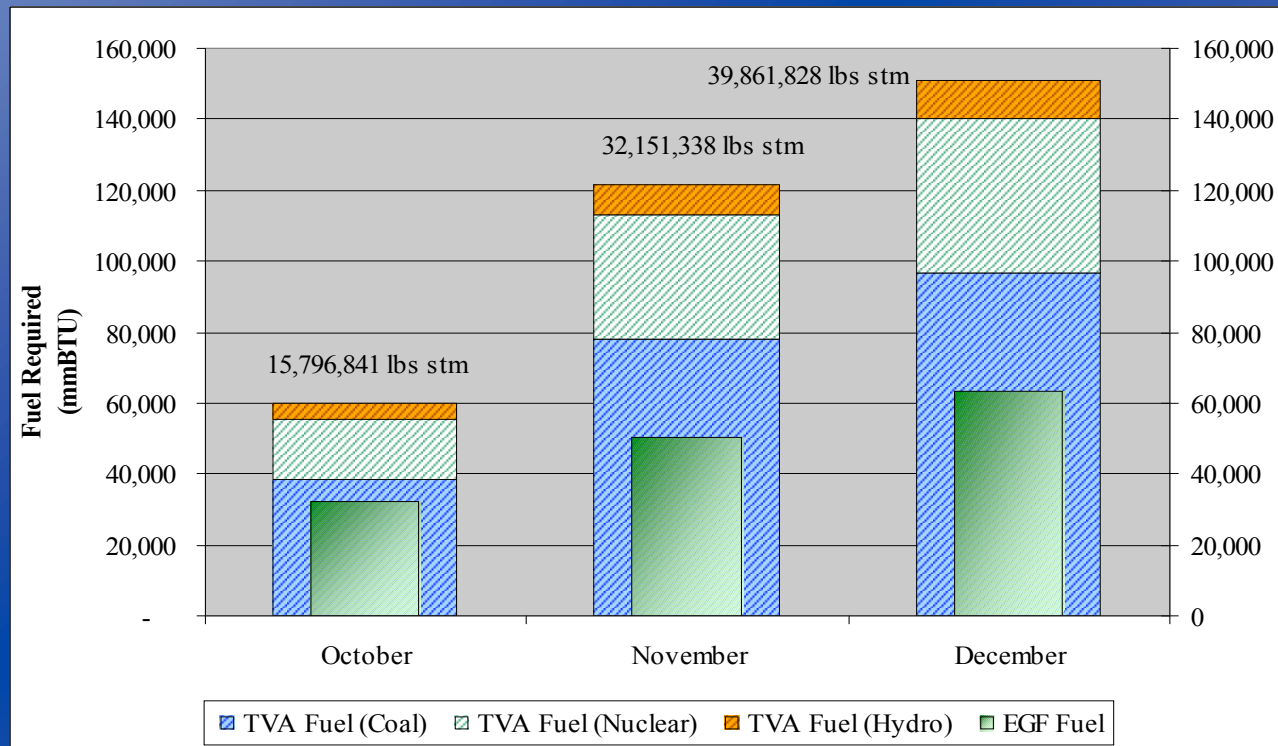


Chilled Water



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Environmental Review: Fuel Comparison

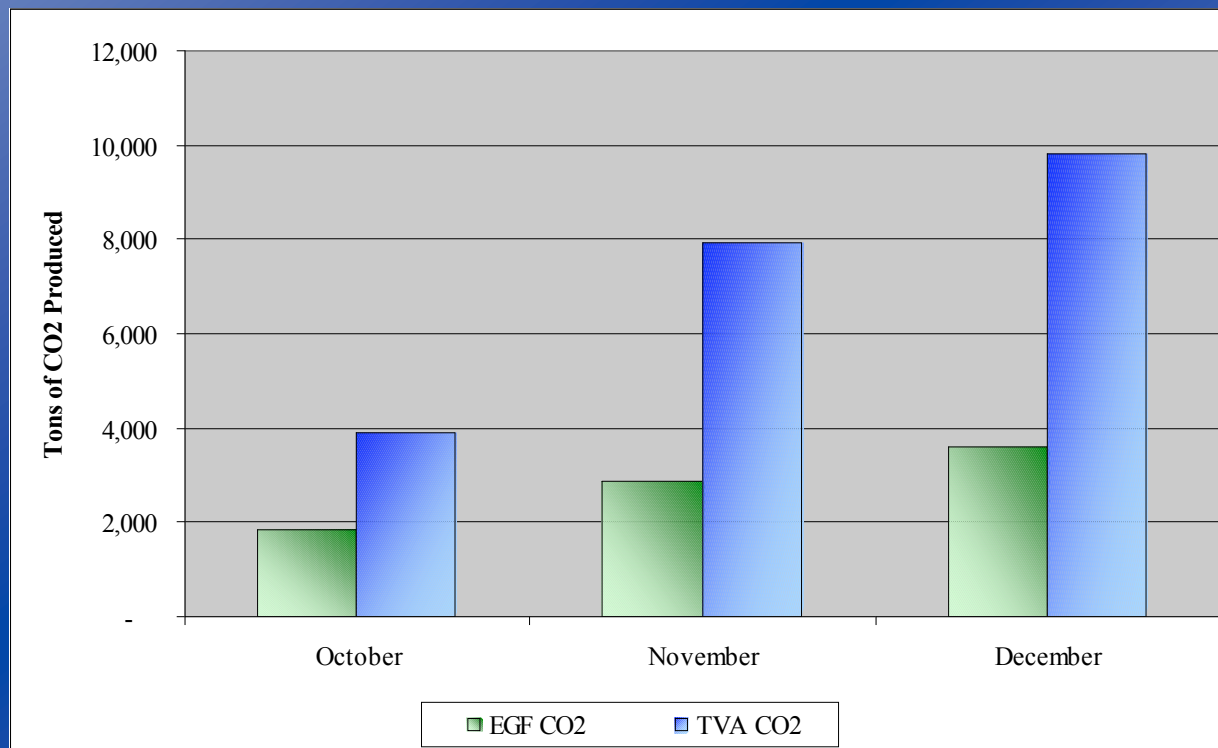


Assumes: 10% TVA distribution losses, 30% TVA plant efficiency and 1,022.1 BTU per lbm for steam-to-energy conversion



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Environmental Review: CO₂ Production



Assumes: 2.66 lbs CO₂ per lbm natural gas at 23,410 BTU/lbm and 2.46 lbs CO₂ per lbm coal at 12,100 BTU/lbm



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5. Review of Operations Monitoring Reports 2nd Quarter FY08



Quarterly Monitoring Report Outline

1. Operations

- Steam: Sales, Sendout, Losses and HDD
- Chilled Water: Sales, Sendout, Losses and CDD

2. Performance Measurement

- Steam: Fuel, Condensate Return, Electricity, Water
- Chilled Water: Electricity, Water

3. Water Treatment

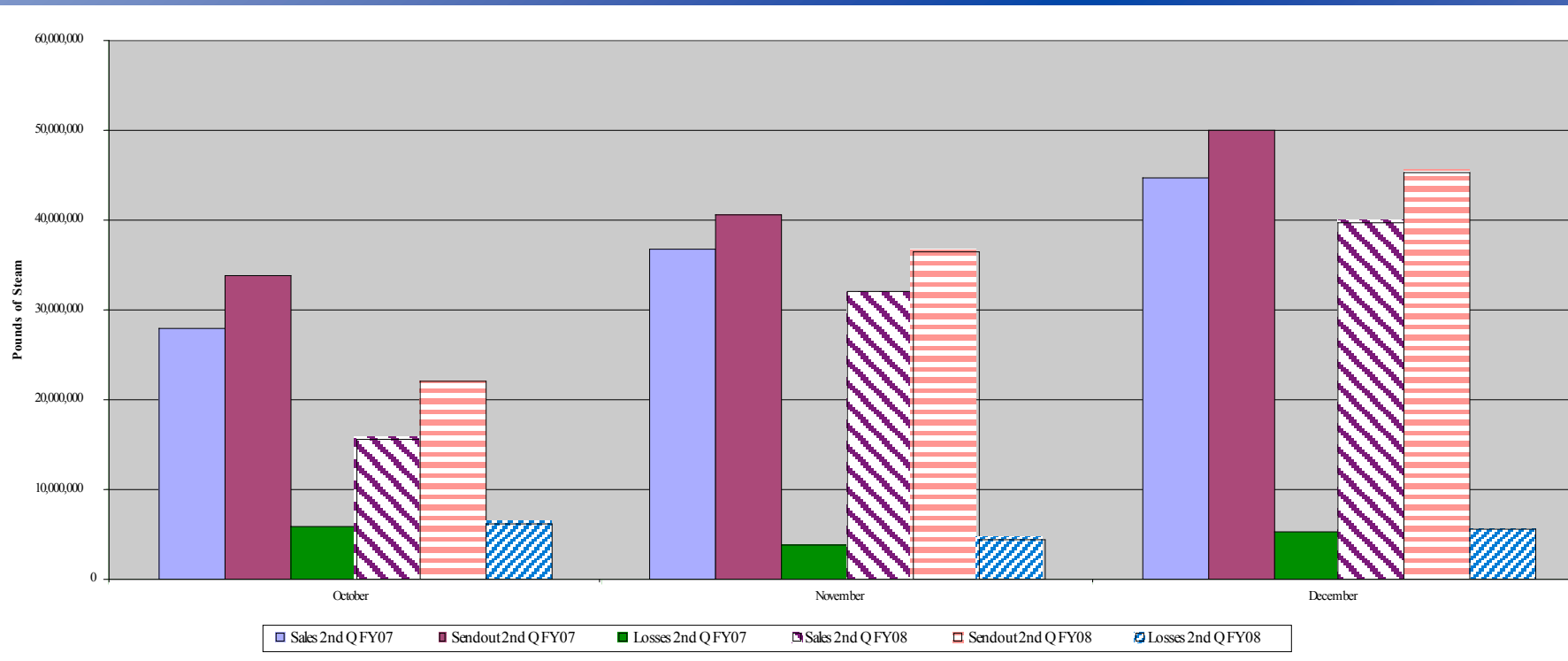
4. EGF Walkthrough

5. EDS Walkthrough



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Operations Summary 2nd Quarter FY08: Steam



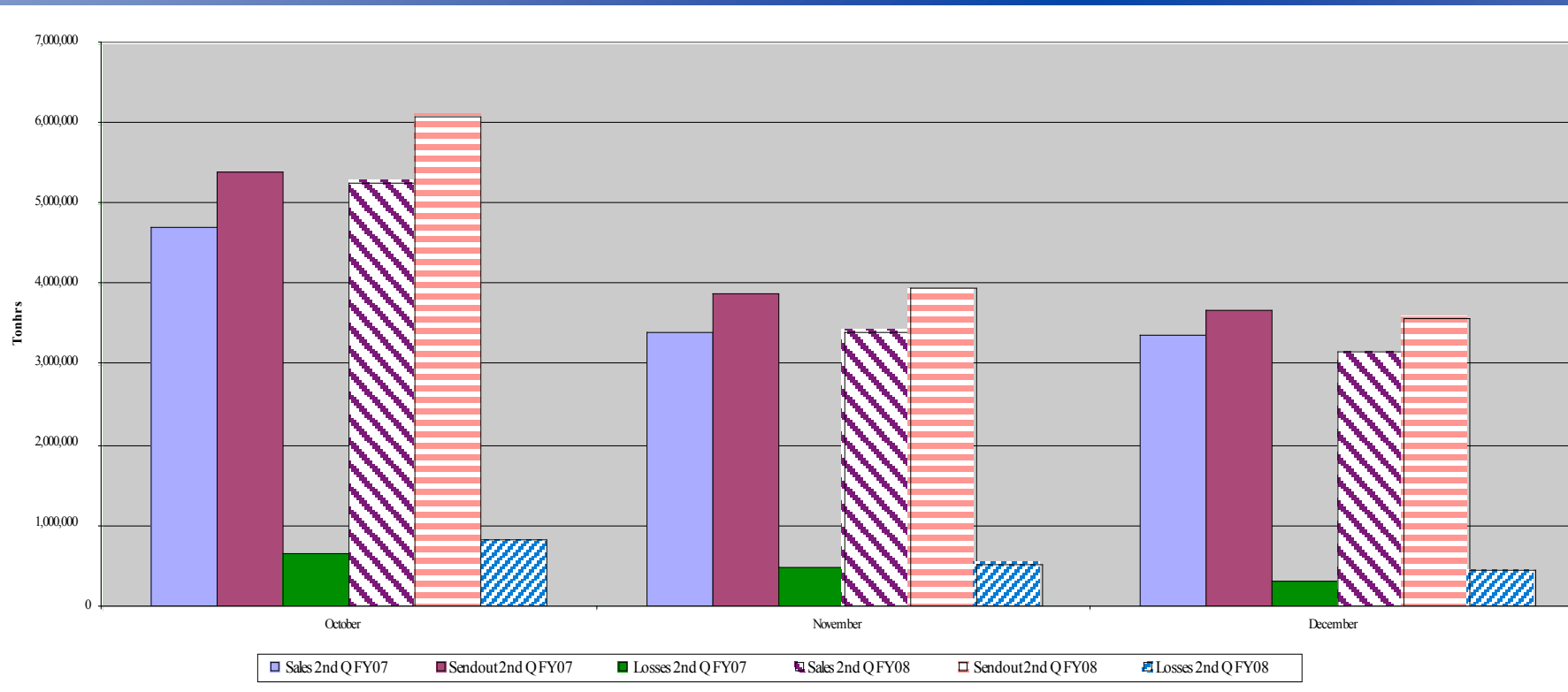


Operations 2nd Quarter FY08 Summary: Steam

	2 nd Qtr FY07	2 nd Qtr FY08	% Difference
Sales (Mlbs)	109,709	87,810	-24.94%
Sendout (Mlbs)	124,853	104,217	-19.80%
Losses (Mlbs)	15,144	16,407	7.70%
Peak (pph)	121,750	100,156	-21.56%
Load Factor	45.94%	47.13%	2.51%
HDD	1,197	1,126	-6.31%



Operations Summary 2nd Quarter FY08: Chilled Water





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Operations 2nd Quarter FY08 Summary : Chilled Water

	2 nd Qtr FY07	2 nd Qtr FY08	% Difference
Sales (tonhrs)	11,501,964	11,853,813	2.97%
Sendout (tonhrs)	12,964,500	13,645,600	4.99%
Losses (tonhrs)	1,462,536	1,791,787	18.38%
Peak (tons)	14,800	14,600	-1.37%
Load Factor	39.25%	42.33%	7.28%
CDD	67	123	45.53%

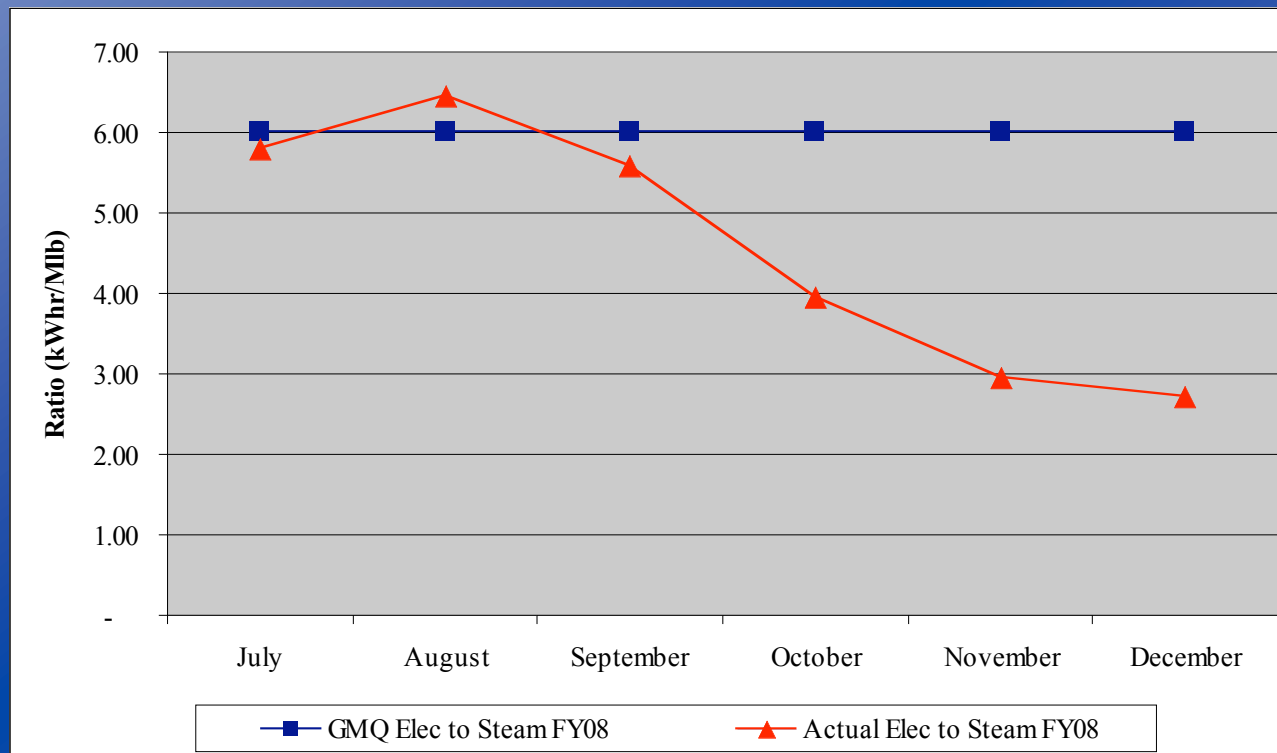


Performance Summary 2nd Qtr FY08: Steam

	2 nd Qtr FY07	2 nd Qtr FY08	% Diff
GMQ Elec (kWhr/Mlb)	6.00	6.00	
Act Elec (kWhr/Mlb)	2.66	3.02	12.16%
GMQ Fuel (Dth/Mlb)	1.781	1.728	
Act Fuel (Dth/Mlb)	1.443	1.402	-2.95%
GMQ Water (kgal)	17,594	6,588	
Act Water (kgal)	16,554	6,865	-141.14%

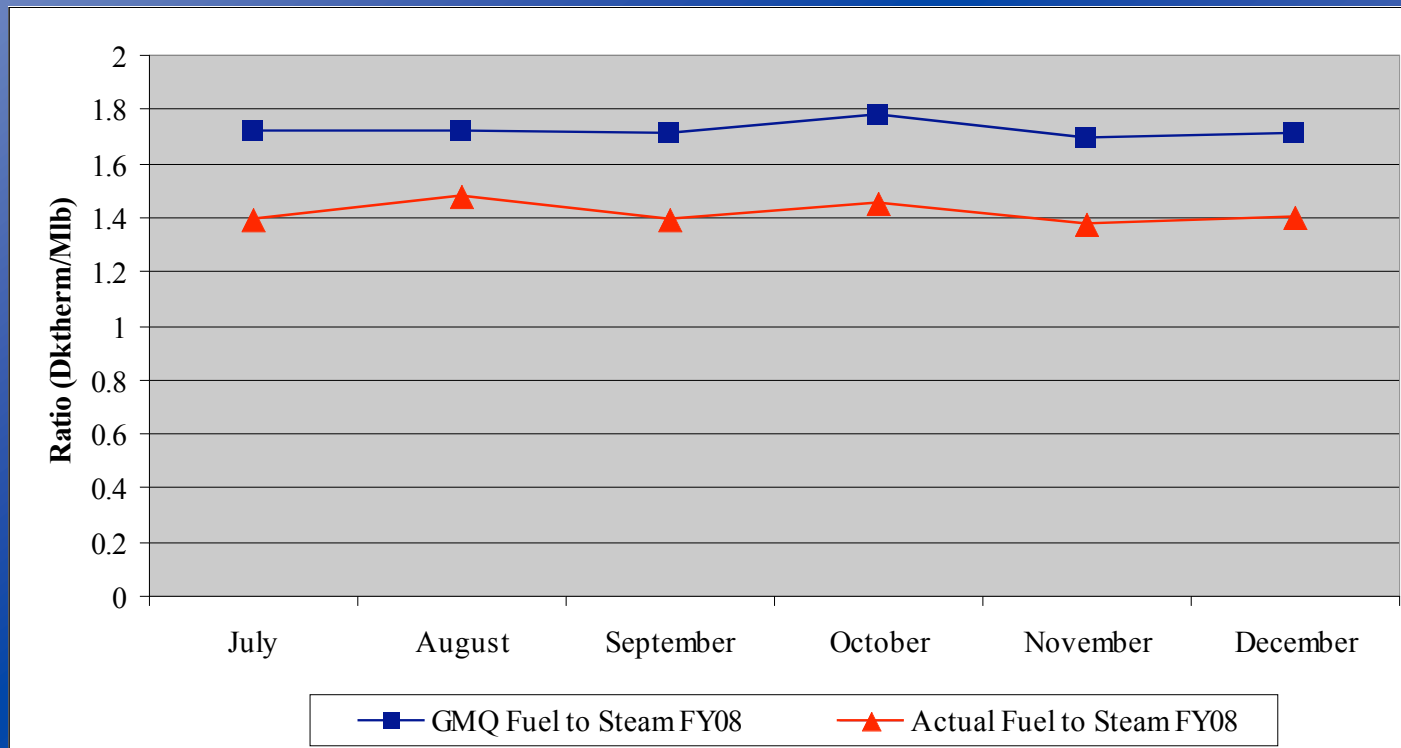


Performance Measurement FY08: Steam Electric Conversion



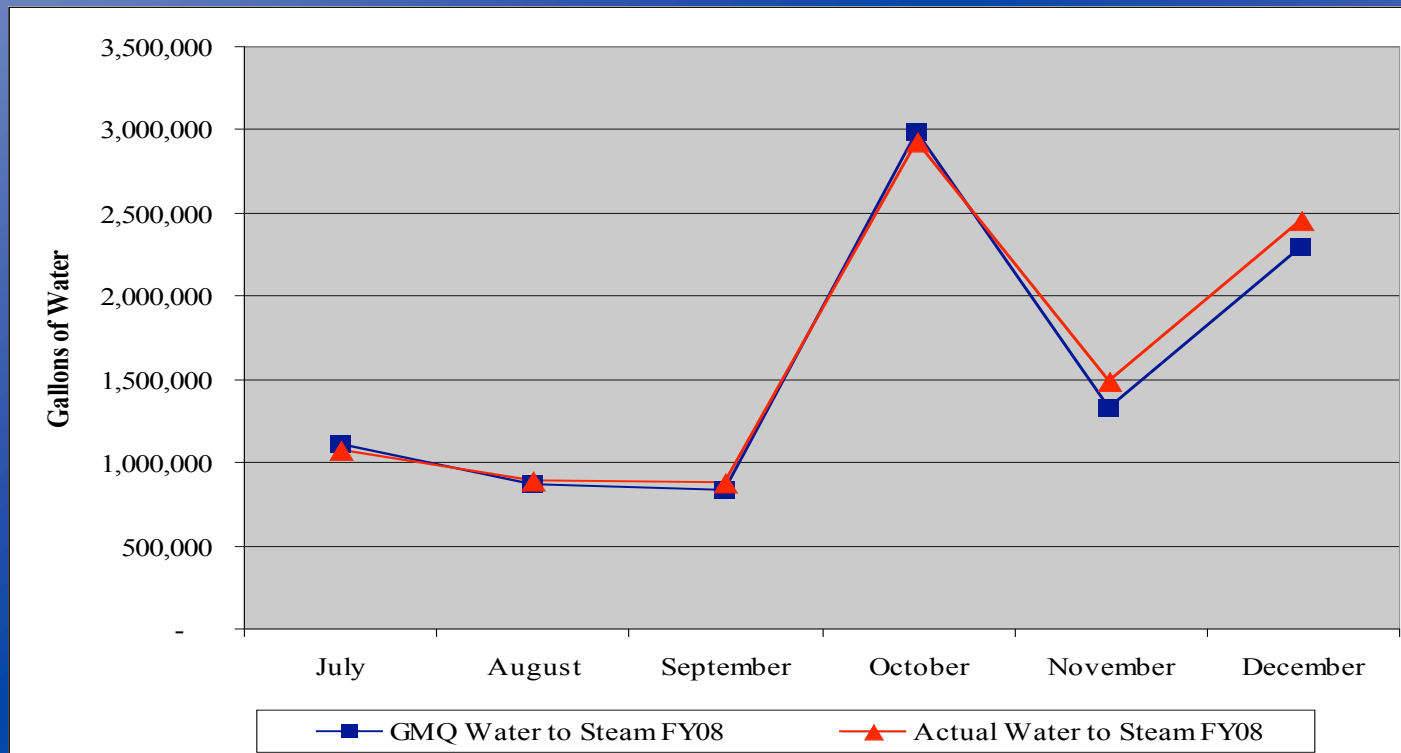


Performance Measurement FY08: Steam Plant Efficiency





Performance Measurement FY08: Steam Water Conversion





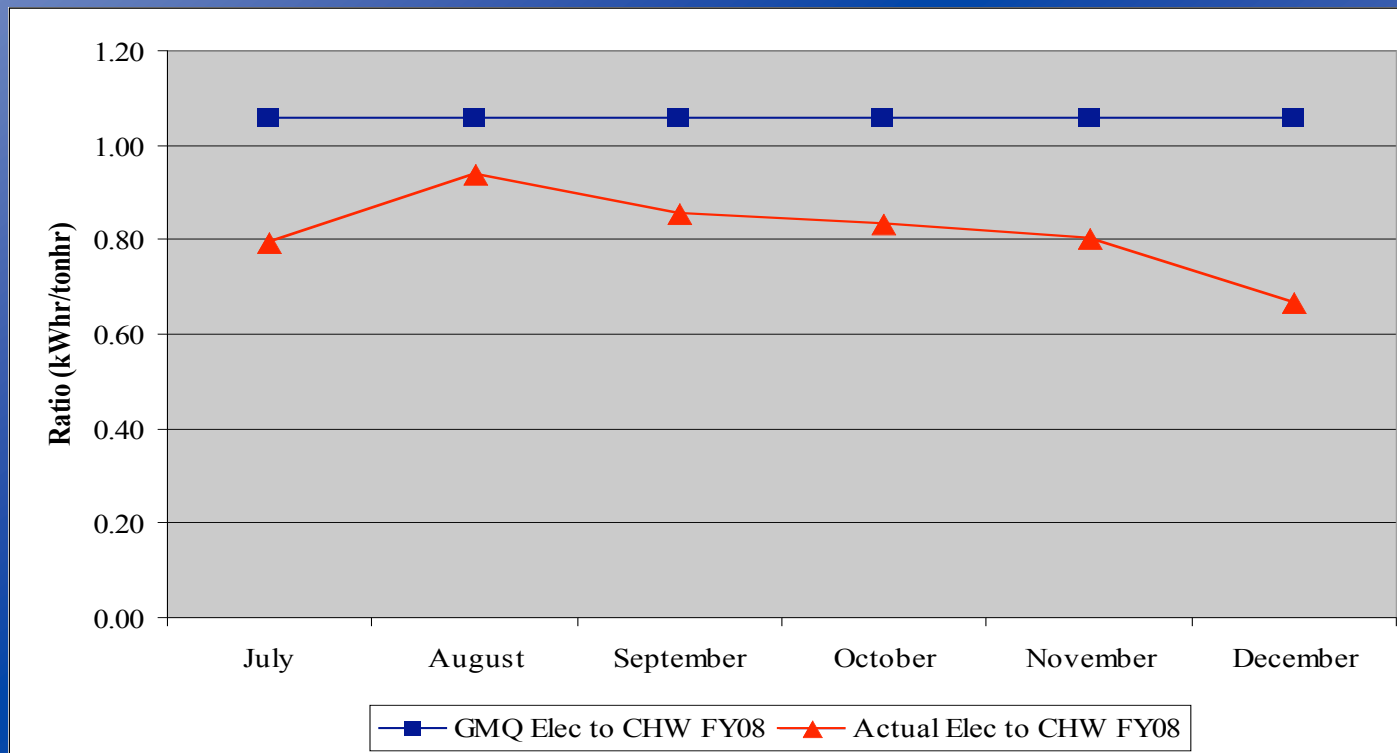
Performance Summary 2nd Qtr FY08: Chilled Water

	2 nd Qtr FY07	2 nd Qtr FY08	% Diff
GMQ Elec (kWhr/tonhr)	1.055	1.055	
Act Elec (kWhr/tonhr)	0.821	0.777	-5.59%
GMQ Water (gal/tonhr)	5.25	5.25	
Act Water (gal/tonhr)	1.91	1.80	-6.14%



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Performance Measurement FY08: Chilled Water Electric Conversion

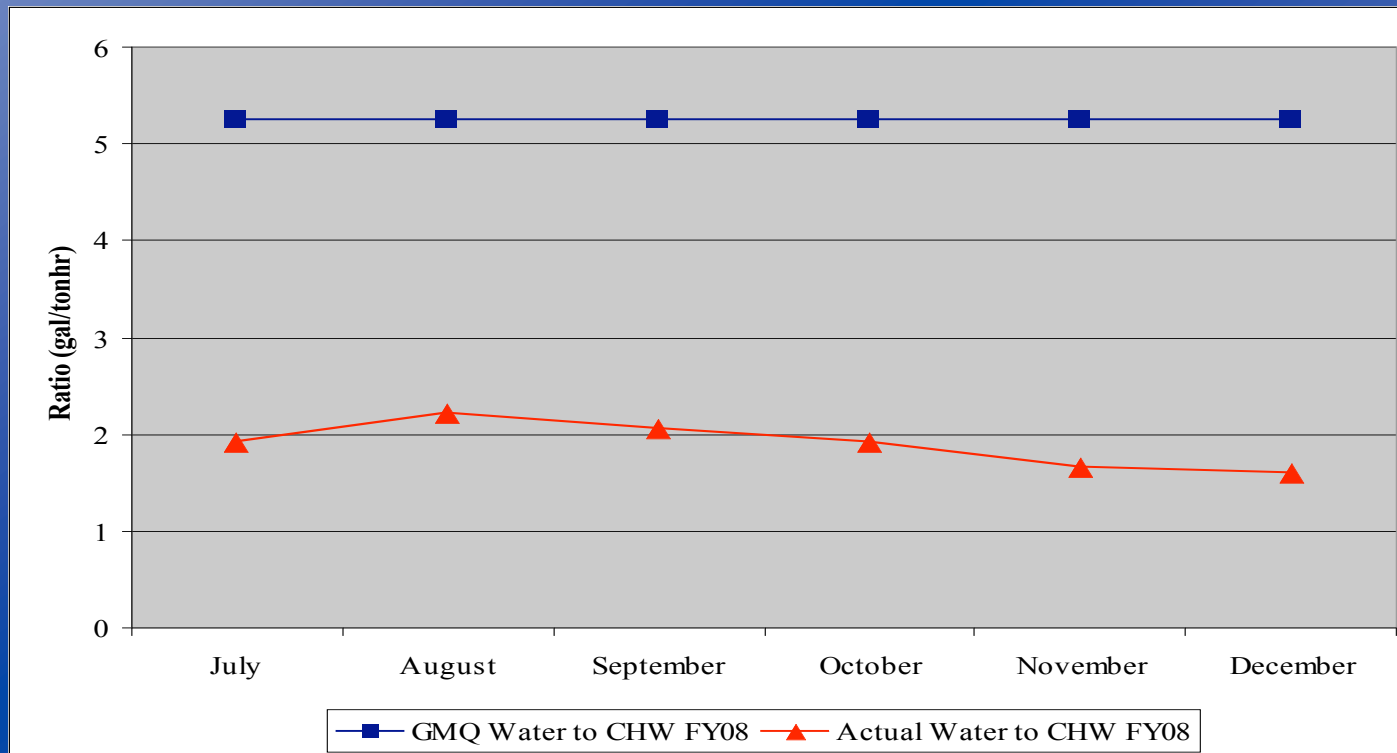




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Performance Measurement FY08: Chilled Water

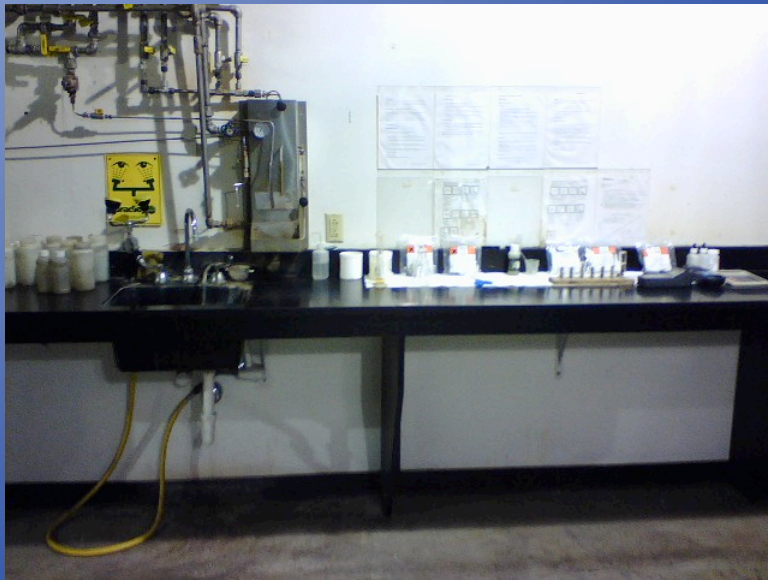
Water Conversion





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Water Treatment



Systems

- Steam/Condensate
 - Corrosion
 - Hardness
 - Chlorine
- Condensing Water
 - Hardness
 - Biologicals
- Chilled Water
 - Hardness/Deposition
 - Corrosion
 - Biologicals



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EGF Walkthrough



Quarterly Inspection Process

- Log Book
- Operations
- Housekeeping
- Equipment
- Building Structure
- Building Exterior and Grounds



EDS Walkthrough



Quarterly Inspection Process

- Housekeeping
 - CNDE has instituted a clean-up program
- Maintenance Items
 - Steam/Condensate Leaks
 - Insulation Repair/Replacement
 - Water Infiltration
 - Corrosion of Structural Metal Components
- Safety Items



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6. Natural Gas Purchasing Up-date

Natural Gas Purchasing Review

**Table 6A: FY08 Gas Spending &
Budget Comparison**

**Table 6B: Projected Gas Costs for
FY08**



Table 6A: FY08 Gas Spending & Budget Comparison

	Actual FY08 To date (Dec 31)	Budget FY08
Steam Sales (Mlbs)	113,314	355,192
Steam Sendout (Mlbs)	148,207	412,022
Fuel Use (Dth)	208,455	611,853
Plant Eff (Dth/Mlb)	1.407	1.485
Total Gas Cost	\$1,991,021	\$7,099,510
Unit Cost of Fuel (\$/Dth)	\$9.551	\$11.514



Table 6B - Projected Gas Costs for FY08

								NDESTargetedHedge Volumes		
	Estimated Consumption (Dth)	Hedged Quantity Dth	Hedge WAC OG Price	Current Market Price	Average Commodity Price	Marked to Market Value (Loss)/Gain	Actual Hedged Percentage Level	NDESTarget Hedge Percentage	% of NDES Targ et Volume Unhedged	# Contracts to Meet NDES Target
Jul -07	26,000	20,700	\$8.668	\$6.929	\$8.313	-\$35,993.16	80%	80%	0%	0.0100
Aug -07	27,000	21,600	\$8.652	\$6.110	\$8.144	-\$54,911.52	80%	80%	0%	0.0000
Sep-07	34,000	27,300	\$8.689	\$5.430	\$8.047	-\$88,981.62	80%	80%	0%	0.0000
Oct-07	48,000	38,600	\$8.673	\$6.423	\$8.233	-\$86,857.72	80%	80%	0%	0.0000
Nov-07	62,000	49,700	\$8.645	\$7.269	\$8.372	-\$68,382.23	80%	80%	0%	0.0000
Dec-07	81,000	56,400	\$8.744	\$7.203	\$8.276	-\$86,895.48	70%	80%	10%	0.8400
Jan-08	86,000	60,600	\$8.742	\$7.172	\$8.278	-\$95,148.06	70%	80%	10%	0.8200
Feb-08	72,000	50,100	\$8.739	\$7.996	\$8.513	-\$37,214.28	70%	80%	10%	0.7500
Mar-08	62,000	43,300	\$8.749	\$8.660	\$8.722	-\$3,849.37	70%	80%	10%	0.6300
Apr-08	50,000	25,100	\$8.625	\$8.668	\$8.647	\$1,071.77	50%	80%	30%	1.4800
May-08	36,000	18,100	\$8.626	\$8.680	\$8.653	\$973.78	50%	80%	30%	1.0700
Jun-08	28,000	13,900	\$8.634	\$8.730	\$8.683	\$1,331.62	50%	80%	30%	0.8400
Summary	612,000	425,400	\$8.698	\$7.439	\$8.410	-\$554,856.27	69%	80%	11%	6.4400

The result of the most recent conference call (02/19/08) was to not increase the hedged amounts at this time



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7. Financial Reports: 2nd Qtr FY08

Item		FY 08 Budget	First Quarter Expenses	Second Quarter Expenses	Third Quarter Expenses	Fourth Quarter Expenses	Total Spending to Date	% of Budget
FOC:	Basic	\$ 3,769,247.05	\$ 934,992.75	\$ 934,992.75	\$ -	\$ -	\$ 1,869,985.50	49.61%
	9th Chiller	\$ 35,318.03	\$ 8,760.99	\$ 8,760.99	\$ -	\$ -	\$ 17,521.98	49.61%
	C/O 6A	\$ 69,729.10	\$ 17,296.74	\$ 17,296.74	\$ -	\$ -	\$ 34,593.48	49.61%
	C/O 6B	\$ 61,045.19	\$ 15,142.71	\$ 15,142.71	\$ -	\$ -	\$ 30,285.42	49.61%
Pass-thru Charges:	Water	\$ 681,640.00	\$ 166,496.32	\$ 88,797.01	\$ -	\$ -	\$ 255,293.33	37.45%
	Chemical Treatment	\$ 156,500.00	\$ 46,370.82	\$ 47,012.89	\$ -	\$ -	\$ 93,383.71	59.67%
	Engineering	\$ 55,401.26	\$ -	\$ -	\$ -	\$ -	\$ -	0.00%
	Insurance	\$ 41,200.00	\$ 29,849.94	\$ -	\$ -	\$ -	\$ 29,849.94	72.45%
	EDS Electricity	\$ -	\$ 8,410.27	\$ 7,820.28	\$ -	\$ -	\$ 16,230.55	
	EDS R&I	\$ 166,203.78	\$ 30,583.87	\$ 3,634.60	\$ -	\$ -	\$ 34,218.47	20.59%
	EDS Surcharge	\$ 66,371.15	\$ -	\$ -	\$ -	\$ -	\$ -	0.00%
Marketing:	CES Sales Activity	\$ 27,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	0.00%
	Incentive Payments	\$ 29,200.00	\$ 7,259.91	\$ 7,259.91	\$ -	\$ -	\$ 14,519.82	49.73%
	Metro Marketing	\$ 53,730.00	\$ -	\$ 27,713.15	\$ -	\$ -	\$ 27,713.15	51.58%
	Project Administration	\$ 25,640.00	\$ 1,328.69	\$ -	\$ -	\$ -	\$ 1,328.69	5.18%
FEA:	Steam	\$ -	\$ 23,048.49	\$ 58,726.69	\$ -	\$ -	\$ 81,775.18	
	Chilled Water	\$ -	\$ 115,602.78	\$ 92,441.27	\$ -	\$ -	\$ 208,044.05	
Misc:	Metro Credit	\$ -	\$ (174,906.59)	\$ (96,617.70)	\$ -	\$ -	\$ (271,524.29)	
	ARFA	\$ -	\$ 13,579.32	\$ 13,579.32	\$ -	\$ -	\$ 27,158.64	
	Deferral	\$ -	\$ -	\$ (24,290.58)	\$ -	\$ -	\$ (24,290.58)	
	Subtotal - Man Fee =	\$ 5,072,021.77	\$ 1,213,233.14	\$ 1,198,635.43	\$ -	\$ -	\$ 2,411,868.57	47.55%
Reimbursed Management Fee			\$ 1,165,533.63	\$ 382,033.82	\$ -	\$ -	\$ 1,547,567.45	
Metro Costs:	Metro Incremental Cost	\$ 617,560.00	\$ 278,603.61	\$ 156,569.91	\$ 11,425.00	\$ -	\$ 446,598.52	72.32%
	Natural Gas	\$ 7,099,510.00	\$ 612,049.30	\$ 1,378,972.05	\$ -	\$ -	\$ 1,991,021.35	28.04%
	Propane	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	Electricity	\$ 4,693,460.00	\$ 1,315,459.26	\$ 845,874.00	\$ -	\$ -	\$ 2,161,333.26	46.05%
Subtotal - Operations =		\$ 17,648,755.55	\$ 3,449,929.18	\$ 3,583,685.99	\$ 11,425.00	\$ -	\$ 7,045,040.17	39.92%
Debt Service								
	2002 Bonds	\$ 4,297,568.53	\$ 1,091,036.04	\$ 1,090,594.30	\$ -	\$ -	\$ 2,181,630.34	50.76%
	2005 Bonds	\$ 629,837.50	\$ -	\$ -	\$ -	\$ -	\$ -	0.00%
	FY07 Projects	\$ 227,768.58	\$ 56,950.00	\$ 56,950.00	\$ -	\$ -	\$ 113,900.00	50.01%
Oper. Reserve Funding Deposit		\$ 191,460.22	\$ 47,233.66	\$ 40,851.01	\$ -	\$ -	\$ 88,084.67	46.01%
Subtotal - Capital =		\$ 5,346,634.84	\$ 1,195,219.70	\$ 1,188,395.31	\$ -	\$ -	\$ 2,383,615.01	44.58%
Total =		\$ 22,995,390.39	\$ 4,645,148.88	\$ 4,772,081.30	\$ 11,425.00	\$ -	\$ 9,428,655.18	41.00%
Revenues =		\$ 20,586,822.46	\$ 4,374,090.55	\$ 4,598,878.84	\$ -	\$ -	\$ 8,972,969.39	43.59%
Metro Funding Amount =		\$ 2,408,567.93	\$ 271,058.33	\$ 173,202.46	\$ -	\$ -	\$ 444,260.79	18.45%



8. FY2009 Budget Status Report

Proposed Budget

Item	FY07 Budget	FY07 Actual Costs	FY08 Budget	FY09 Budget	% change FY08 to FY09
FOC: Basic	\$ 3,659,463	\$ 3,659,463	\$ 3,769,247	\$ 3,852,800	2.22%
9th Chiller	\$ 34,289	\$ 34,290	\$ 35,318	\$ 36,400	3.06%
C/O 6A	\$ 67,698	\$ 67,698	\$ 69,729	\$ 71,800	2.97%
C/O 6B	\$ 59,267	\$ 56,230	\$ 61,045	\$ 62,900	3.04%
Chemicals	\$ 132,870	\$ 180,882	\$ 156,500	\$ 162,800	4.03%
Engineering	\$ 53,788	\$ -	\$ 55,401	\$ 40,000	-27.80%
Insurance	\$ 32,632	\$ 39,883	\$ 41,200	\$ 42,400	2.91%
Marketing: CES Sales Activity	\$ 30,000	\$ 21,544	\$ 27,000	\$ 27,800	2.96%
Metro Marketing	\$ 59,700	\$ 49,850	\$ 53,730	\$ 52,900	-1.54%
Incentive Payments	\$ 28,528	\$ 28,415	\$ 29,200	\$ 30,100	3.08%
Project Administration	\$ 61,300	\$ -	\$ 25,640	\$ 26,400	2.96%
Metro Incremental Cost	\$ 592,100	\$ 688,663	\$ 617,560	\$ 614,000	-0.58%
Water/Sewer	\$ 693,918	\$ 532,880	\$ 681,640	\$ 775,200	13.73%
Natural Gas/Propane	\$ 8,015,491	\$ 5,727,439	\$ 7,099,510	\$ 6,084,900	-14.29%
Electricity	\$ 4,318,594	\$ 3,929,492	\$ 4,693,460	\$ 5,076,000	8.15%
EDS Repair & Improvement	\$ 161,363	\$ 132,104	\$ 166,204	\$ 169,900	2.22%
EDS Surcharge	\$ 64,438	\$ -	\$ 66,371	\$ 67,800	2.15%
Subtotal - Operations	\$ 18,065,440	\$ 15,148,832	\$ 17,648,756	\$ 17,194,100	-2.58%
Debt Service					
2002 Bonds	\$ 4,299,502	\$ 4,299,500	\$ 4,297,569	\$ 4,297,569	0.00%
2005 Bonds	\$ 637,838	\$ 637,838	\$ 629,838	\$ 629,838	0.00%
FY07 Projects	\$ -	\$ -	\$ 227,769	\$ 227,769	0.00%
FY08 Projects	\$ -	\$ -	\$ -	\$ -	0.00%
Oper. Reserve Funding Deposit	\$ 433,274	\$ 433,272	\$ 191,460	\$ 115,647	-39.60%
Subtotal - Capital	\$ 5,370,614	\$ 5,370,609	\$ 5,346,635	\$ 5,270,822	-1.42%
Total	\$ 23,436,054	\$ 20,519,442	\$ 22,995,390	\$ 22,464,922	-2.31%
Revenue Required	\$ 21,153,871	\$ 18,487,806	\$ 20,586,822	\$ 20,118,300	-2.28%
Metro Funding Amount	\$ 2,282,182	\$ 2,031,636	\$ 2,408,568	\$ 2,346,622	-2.57%



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9. Capital Projects Review

Financial Summary

Table 9A: Capital Projects Summary

Table 9B: Capital Project Detail



Table 9A: Capital Project Summary (12/31/07)

	Spent to End of FY07	2 nd Qtr Spending	Balance at End of 2 nd Qtr
2002A Bond	\$3,599,629	\$54,088	\$72,496
R&I Projects	\$132,104	\$51,343	\$315,658
2005B Bond	\$7,418,815	\$49,592	\$629,078
2007 Bond	\$1,979,628	\$0	\$237,729
2008 Bond	\$0	\$8,015	\$2,728,084
Total	\$13,130,176	\$163,038	\$3,983,045



Table 9B: Capital Project Detail (12/31/07)

	Budget	Spent through 2 nd Qtr FY08	Remaining to Be Spent
2002A Projects			
Tennessee Towers Decoupling	\$1,350,422	\$1,277,926	\$72,496
<u>Total Closed Projects</u>	<u>\$2,377,281</u>	<u>\$2,377,281</u>	<u>\$0</u>
Total 2002A Projects	\$3,727,703	\$3,655,207	\$72,496
Repair/Improvement	\$276,840	\$81,927	\$315,658
2005B Projects			
Renaissance Re-piping	\$538,818	\$576,307	(\$37,489)
Customer Metering	\$1,676,439	\$1,766,412	(\$89,973)
Regions Cond Line Replacement	\$320,000	\$18,803	\$301,197
General and Admin	\$866,710	\$328,061	\$538,649
<u>Total Closed Projects</u>	<u>\$4,785,044</u>	<u>\$4,868,350</u>	<u>(\$83,306)</u>
Total 2005B Projects	\$8,187,011	\$7,557,934	\$629,078



Table 9B (cont'd): Capital Project Detail (12/31/07)

	Budget	Spent through 2 nd Qtr FY08	Remaining to Be Spent
2007 Projects			
MH 18 to L Steam/Cond Replacement	\$818,206	\$997,288	(\$179,082)
TN Tower Cond Line Replacement	\$317,031	\$339,030	(\$21,999)
MH 5 to 6 Cond Replacement	\$489,688	\$491,403	(\$1,715)
JK Polk Cond Line	\$413,123	\$456,218	(\$43,095)
Tunnel Lighting Ph II	\$152,551	\$153,075	(\$524)
General and Admin	\$484,152	\$0	\$484,152
<u>Total Closed Projects</u>	<u>\$183,749</u>	<u>\$183,758</u>	<u>(\$9)</u>
Total 2007 Projects	\$2,858,500	\$2,620,771	\$237,729



Table 9B (cont'd): Capital Project Detail (12/31/07)

	Budget	Spent through 2 nd Qtr FY08	Remaining to Be Spent
2008 Projects			
MH 5 to 9 Cond Replacement	\$550,000	\$1,081	\$548,920
MH 6 to 23 & Sheraton Cond Line Repair	\$700,000	\$1,248	\$698,752
Ryman Aud Cond Replacement	\$150,000	\$56	\$149,944
State Steam Tunnel	\$325,000	\$0	\$325,000
Tunnel Lighting Ph III	\$90,000	\$0	\$90,000
Temporary Boiler Connection	\$93,500	\$0	\$93,500
MH & Tunnel Insulation Repair	\$100,000	\$618	\$99,382
MH & Tunnel Access Modification	\$200,000	\$0	\$200,000
Expansion Jt Replacement 4 th Ave Tunnel	\$20,000	\$0	\$20,000
Wildhorse Steam & Cond	\$130,000	\$17,413	\$112,587
<u>General and Admin</u>	<u>\$370,000</u>	<u>\$0</u>	<u>\$370,000</u>
Total 2008 Projects	\$2,748,500	\$20,416	\$2,728,084



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Return on Investment

- Capital Project ROI
 - Boiler O₂ Trim
 - Power Factor Correction Capacitor
 - Condensate Return
 - New Customers
- Funding



10. Customer Contract Capacity Reviews

- Most Customers Incurring TIFS
 - 26, 27 & 28 in Oct, Nov & Dec 07
 - Same Customers Repeat (State, Metro)
 - Increase TIFS with Colder Weather
- LP Field and Viridian Tower Requesting Chilled Water Demand Reductions
- Ryman & Municipal Auditorium Steam Excursions



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11. Other Board Member Items



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12. Adjourn